

Other Matrix Information

Table C-1 Matrix information

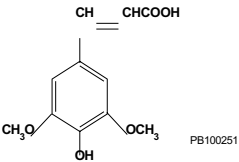
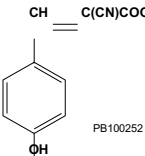
Matrix	Applications/Color	Matrix Solution Concentration	Characteristic Matrix Ions (monoisotopic)
<p>Sinapinic acid (see mass spectrum on page -3) MW 224.07 Da</p>  <p style="text-align: right; font-size: small;">PB100251</p>	<p>Applications:</p> <ul style="list-style-type: none"> • Peptides • Proteins <p>Color of crystals/ solution: White</p> <p>Note: Matrix powder may also contain orange crystals. Do not use crystals when preparing solutions.</p>	<ul style="list-style-type: none"> • 10 mg/mL in 70:30 water:acetonitrile (0.1% TFA final conc.) • 10 mg/mL in 50:50 water:acetonitrile (0.1% TFA final conc.) if sample contaminated 	<ul style="list-style-type: none"> • 225.076 • 224.068 • 207.066 • 431.134
<p>Alpha-cyano-4-hydroxycinnamic acid (αCHCA) (see mass spectrum on page C-3) MW 189.04 Da</p>  <p style="text-align: right; font-size: small;">PB100252</p>	<p>Applications:</p> <ul style="list-style-type: none"> • Peptides • Proteins <p>Color of crystals/ solution: Yellow</p>	<p>5 mg/mL in 50:50 water:acetonitrile (0.1% TFA final conc.)</p>	<ul style="list-style-type: none"> • 164.047 • 195.050 • 172.040 • 379.093 • 212.032 • 294.076

Table C-1 Matrix information (*continued*)

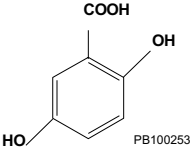
Matrix	Applications/Color	Matrix Solution Concentration	Characteristic Matrix Ions (monoisotopic)
<p>2,5-dihydroxybenzoic acid (2,5-DHB) (see mass spectrum on page -4) MW 154.03 Da</p> 	<p>Applications:</p> <ul style="list-style-type: none"> • Peptides (mixtures) • Proteins • Carbohydrates • Glycolipids (negative ion mode) • Polar synthetic polymers <p>Color of crystals/ solution: White</p>	<p>Peptides/proteins: 5 mg/mL in 90% deionized water, 10% methanol or ethanol</p> <p>Other compounds: 10 mg/mL in water</p>	<ul style="list-style-type: none"> • 155.034 • 154.027 • 137.024 • 273.040
	<p>Applications: Small molecules</p> <p>Color of crystals/ solution: White</p>	<p>10 mg/mL in solvent in which sample and matrix are soluble</p>	

Table C-1 Matrix information (continued)

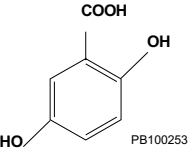
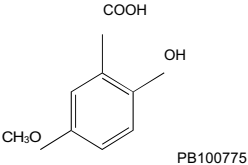
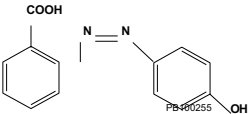
Matrix	Applications/Color	Matrix Solution Concentration	Characteristic Matrix Ions (monoisotopic)
<p>Mixture of 2,5-dihydroxybenzoic acid and 5-methoxysalicylic acid (sDHB)</p> <p>(see mass spectrum on page -4)</p> <p>MW 154.03 Da + MW 168 Da Mixture MW = 322.03 Da</p> <div style="display: flex; flex-direction: column; align-items: center;">   </div>	<p>Applications:</p> <p>Large proteins</p> <p>Color of crystals/ solution: White</p>	<p>10 mg/mL in solvent in which sample and matrix are soluble</p>	<ul style="list-style-type: none"> • 155.034 • 154.027 • 137.024 • 273.040 • 151.040 • 168.042 • 169.050
<p>2-(4-hydroxy-phenyl azo)-benzoic acid (HABA)</p> <p>(see mass spectrum on page C-4)</p> <p>MW 242.07 Da</p> 	<p>Applications:</p> <ul style="list-style-type: none"> • Proteins • Lipopolysaccharides • Polar and nonpolar synthetic polymers <p>Color of crystals/ solution: Orange</p>	<ul style="list-style-type: none"> • ~1.3 mg/mL in 50:50 water: acetonitrile or in 40:40:20 water: acetonitrile: methanol • 10 mg/mL in ethanol or methanol 	<ul style="list-style-type: none"> • 243.077 • 265.059

Table C-1 Matrix information (continued)

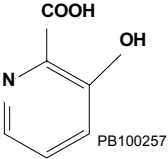
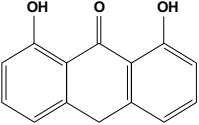
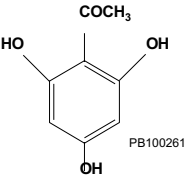
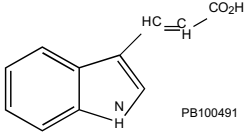
Matrix	Applications/Color	Matrix Solution Concentration	Characteristic Matrix Ions (monoisotopic)
<p>3-hydroxypicolinic acid (3-HPA) (see mass spectrum on page -5) MW 139.03 Da</p> 	<p>Applications: Oligonucleotides Color of crystals/ solution: Light brown</p>	<p>Make 9:1 solution of matrix:diammonium citrate Matrix – 50 mg/mL in 50:50 water:acetonitrile Diammonium citrate – 50 mg/mL in water</p>	<ul style="list-style-type: none"> • 96.045 • 140.035 • 279.062 • 235.072 • 234.064 • 233.056 • 191.082 • 189.066
<p>Dithranol (see mass spectrum on page -5) MW 226.06 Da</p> 	<p>Applications: Nonpolar synthetic polymers Color of crystals/ solution: Yellow</p>	<p>10 mg/mL in tetrahydrofuran + silver trifluoroacetate (to minimize Na⁺ and K⁺ adduct formation)</p>	<ul style="list-style-type: none"> • 225.055 • 226.063 • 227.071 • 211.076
<p>2,4,6 trihydroxy acetophenone (THAP) (see mass spectrum on page -5) MW 168.04 Da</p> 	<p>Applications: Small Oligonucleotides Color of crystals/ solution: White</p>	<p>Make 9:1 solution of matrix:diammonium citrate Matrix – 10 mg/mL in 50:50 water:acetonitrile Diammonium citrate – 50 mg/mL in water</p>	<p>169.050</p>

Table C-1 Matrix information (*continued*)

Matrix	Applications/Color	Matrix Solution Concentration	Characteristic Matrix Ions (monoisotopic)
<p>trans-3-indoleacrylic acid (IAA) (see mass spectrum on page -6) MW 187.2</p> 	<p>Applications: Non-polar polymers Color of crystals/ solution: White</p>	<p>10⁻¹ M in solvent appropriate for sample</p>	<ul style="list-style-type: none"> • 187.063 • 188.071 • 170.061 • 144.081 • 130.066 • 375.134 • 329.120 • 284.131
<p>Picolinic acid</p>	<p>Tang, K., N.I. Taranenkov, S.L. Allman, C.H. Chen, L.Y. Chang, and K.B. Jacobson, "Picolinic Acid as a Matrix for Laser Mass Spectrometry of Nucleic Acids and Proteins," <i>Rapid Commun. Mass Spectrom.</i>, 1994, 8, 673–677.</p>		
<p>Nicotinic acid</p>	<p>Ehring, H.M., M. Karas, F. Hillenkamp, <i>Org. Mass Spectrom.</i>, 1992, 27, 472–480.</p>		